



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

# SCIENCE

---

NEW SERIES. VOLUME XLVI

JULY-DECEMBER, 1917

---

NEW YORK  
THE SCIENCE PRESS  
1917

---

THE NEW ERA PRINTING COMPANY,  
41 NORTH QUEEN STREET,  
LANCASTER, PA.

---

# CONTENTS AND INDEX.

NEW SERIES. VOL. XLVI.—JULY TO DECEMBER, 1917

THE NAMES OF CONTRIBUTORS ARE PRINTED IN SMALL CAPITALS

- BAKER, W. C., Foucault Pendulum, 489  
 BARBOUR, T., Papers on Zoology from Michigan, 643  
 BAUER, L. A., Ocean Magnetic Observations, H. A. BUMSTEAD, 342  
 Bayliss, W. M., Food and Diet, G. LUSK, 18  
 Bean Stems, Girdling of, J. H. MUNCIE, 88  
 BENEDICT, R. C., Clothes Moth, 464  
 BENZIGER, M., M. H. FISCHER, M. O. HOOKER and W. D. COFFMAN, Polybasic Acids and their Salts, 189  
 Bergen, JOSEPH YOUNG, 379  
 BERRY, E. W., "Age and Area" Hypothesis, 539  
 Berry, R. J. A., and A. W. D. ROBERTSON, Australian Aboriginal Crania, A. HERDLICKA, 315  
 BIGELOW, M. A., Names of Plants, 16  
 "Bio-colloids," The Effect of Acids and Salts on, D. T. MACDOUGAL and H. A. SPOEHR, 269  
 Biological, Station at Beaufort, N. C., S. F. HILDEBRAND, 175; Societies, L. G. ROWNTREE, 583  
 BLEILE, A. M., Reply to Dr. Erlanger, 111  
 Bleile, Dr., Reply to, J. ERLANGER, 409  
 BLODGETT, F. H., Isolation Cultures, 386  
 Boas, F., Tsimshian Mythology, J. R. SWANTON, 514  
 BOLLEY, H. L., Wheat Cropping, 49  
 BOSS, B., Catalogue of Stars, E. B. KNOBEL, 365  
 Botanical Soc. of Wash., H. L. SHANTZ, 72  
 Botrytis and Sclerotinia, F. J. SEAVER, 163  
 BOWIE, W., Use of Mean Sea Level as the Datum for Elevations, E. LESTER JONES, 164  
 Brazil, Medical Work in, 11  
 BREED, R. S., Popular Science, 238  
 BROOKS, C. F., Aerography, A. McADIE, 264  
 BROWN, P. E., Mold Action and Soils, 171  
 Brunt, D., Observations, H. L. RIETZ, 588  
 Bulkeley, L. D., Cancer, L. LOEB, 266  
 BUMSTEAD, H. A., Ocean Magnetic Observations, L. A. BAUER, 342  
 BURGE, W. E., The Catalase Content of Insects, 295; of Breast Muscle, 440; Chloroform, 618  
 Burket, W. C., Bibliography of William Henry Welch, F. H. GARRISON, 240  
 CAIRNS, W. D., Math. Assoc. of Amer., 207  
 Camp Wheeler, Medical Inspection of, 558  
 CAMPBELL, D. H., Extraordinary Rainfall, 511  
 CAMPBELL, W. W., A Remarkable Coincidence, 36  
 Canadian Stratigraphy and Paleontology, K. F. MATHER, 66  
 Carnegie Institution and the Public, R. S. WOODWARD, 573  
 Catalase Content of Insects, 295; of Breast Muscle, W. E. BURGE, 440  
 Cereal, Conference, 11; C. W. HUNGERFORD, 316  
 CHAPIN, F. S., The Physical Basis of Society, C. Kelsey, 215  
 Chemical, Laboratories and National Welfare, W. A. NOYES, 1; Soc., Amer., Kansas City Meeting, 94; Boston Meeting, C. L. PARSONS, 108, 119, 143, 169, 542, 571, 596, 621, 645; Industries, Third National Exposition, 157; Industries of U. S., 611  
 Chemicals and War in England, 427  
 Chemistry, and Phytogeography, J. A. HARRIS, 25; Teaching, H. A. CURTIS, 183; Outlook, J. STIEGLITZ, 321; Pre-medical Training in, F. S. HAMMETT, 504; Colloid, of Fehling's Test, L. ROSENBERG, 617  
 Chemists, War Service for, C. L. PARSONS, 451  
 China, Agricultural Education and Research, 54  
 Church, Professor, Tribute to, 535  
 Cilia in the Arthropoda, N. FASTEN, 440  
 Clark, William Bullock, 104  
 Climatic, Pulsations, C. E. VAIL, 90; Index, C. KEYES, 139  
 CLUTE, W. N., Names of Plants, 483  
 Coal, Anthracite, 132  
 Coast and Geod. Sur. and the War and Navy Departments, 429  
 COBB, N. A., Intra-vitam Color Reactions, 167  
 COCKERELL, T. D. A., Letters of, H. MÜNSTERBERG, 40  
 COFFMAN, W. D., M. H. FISCHER, M. BENZIGER and M. O. HOOKER, Polybasic Acids and their Salts, 189  
 Coincidence, Remarkable, W. W. CAMPBELL, 36  
 COLE, F. N., Amer. Math. Soc., 369, 518  
 COLLEY, R. H., G. B. POSEY and G. F. GRAVATT, Uredinia, 314  
 Color Reactions, Intra-vitam, N. A. COBB, 167  
 Colors of Letters, D. S. JORDAN, 311  
 Columbia University and Professor Cattell, 363, 411  
 Columbian Institute, 507  
 COMPTON, A. H., and O. ROGNLEY, Ultimate Magnetic Particle, 415  
 CONN, H. J., Chemical Transformation of Soils, 252  
 CONNER, S. D., Drainage and Soil Acidity, 346  
 COOK, O. F., Trans-Pacific Agriculture, 436  
 Cornell Medical School, 380  
 Cosmological Theory, W. H. MCNAIRN, 599  
 Cotton Rust in Texas, J. J. TAUBENHAUS, 267  
 COURTIS, S. A., Section L of the Amer. Assoc. for the Adv. of Sci., 479  
 CRANE, E. J., German-English Dictionary for Chemists, A. M. PATTERSON, 414  
 Crossing-over in Sex Chromosomes, H. D. GOODALE, 213  
 CURTIS, H. A., Teaching Chemistry, 183  
 CURTIS, M. M., Man and the Anthropoids, 88  
 Darwin, Erasmus and Benjamin Franklin, L. L. WOODRUFF, 291; W. C. PECKHAM, 459  
 DAVIS, B. M., Amer. Soc. of Naturalists, 453  
 D. C., Amer. Assoc. of Variable Star Observers, 620  
 Discoveries and Inventions, 17  
 Discussion and Correspondence, 15, 36, 60, 88, 111, 139, 160, 183, 210, 237, 262, 288, 311, 340, 360, 386, 409, 432, 457, 483, 511, 538, 564, 586, 616, 638  
 DOANE, R. W., Mites attacking Crops, 192; Smelter Gases and Insects, 295

- DOWNING, E. R., Enrollment in Science in High Schools, 351
- DOX, A. W., and G. P. PLAISANCE, Mannite in Silage, 192
- DUANE, W., Radiation and Matter, 347
- EASTMAN, C. R., Fish Names, Ancient and Modern, 228
- ECKHARDT, E. A., When is a Force not a Force? 340
- Eclipse, Total, 404
- Ecology, Plant, and Agriculture, W. G. WATERMAN, 223
- EIGENMANN, C. H., Zoological Research, 302
- Electrical Engineers and U. S. Naval Reserve, 354
- Electromerism, L. W. JONES, 493
- ELLEFSON, L. J., and I. C. HALL, The Aerobic Culture of Anaerobes, 570
- Elliott, Daniel Giraud, Medal, 85
- ELLIS, F. W., Apparatus for Physiological and Physical Laboratories, 416
- ELLWOOD, C. A., The Social Sciences, 469
- Engineering Council, 12
- Equations as Statements, D. L. WEBSTER, 187
- ERLANGER, J., Reply to Dr. Bleile, 409
- Erlanger, Dr., Reply to, A. M. BLEILE, 111
- Euler's Dynamical Equations, A. T. JONES, 312
- Experimental Biol., Federation of Amer. Societies for, C. W. GREENE, 452
- Explanation, Simple, C. G. HOPKINS, 362
- FALK, K. G., and J. M. NELSON, The Structure of Matter, 551
- Family History Register, C. W. HARGITT, 113
- FASTEN, N., Cilia in the Arthropoda, 440
- Faunal Conditions in S. Ga. Islands, R. C. MURPHY, 118
- FEWKES, J. W., Pueblo Ruin in Colorado, 255
- Filing Pamphlets, M. R. MILLER, 263
- Findlay, A., Chemistry, J. L. HOWE, 364
- Fireflies and Synchronism, F. C. GATES, 314
- Firefly, Source of the Light in, E. N. HARVEY, 241
- Fish Names, C. R. EASTMAN, 228
- Food, G. LUSK, 18; Situation and Department of Agriculture, 528
- Force, Elementary Treatment of, P. E. KLOPSTEG, 63
- Forest Service, 306, 632
- FOSTER, A. C., and F. A. WOLF, Bacterial Leaf Spot of Tobacco, 361
- Fowl Nematode, Transmitting, J. E. ACKERT, 394
- Franklin, Benjamin, B. W. KUNKEL, 437; and Erasmus Darwin, L. L. WOODRUFF, 291
- FRASER, W. P., Apple Scab Fungus, 280
- FREE, E. E., Gelatine and Agar Gels, 142
- Fuel Research, British Experimental Stations, 506
- Gager, C. S., Botany, E. C. JEFFREYS, 617
- GARDNER, J. H., Kentucky as an Oil State, 279
- GARRISON, F. H., Bibliography of William Henry Welch, 240
- GATES, F. C., Synchronism in the flashing of Fireflies, 314
- Gels, Gelatine and Agar, E. E. FREE, 142
- Geological Survey, War Activities of, 633
- Geologists, State, Amer. Assoc. of, W. O. HOTCHKISS, 556
- Geology, Military, J. E. POGUE, 8; American, R. W. SAYLES, 162
- GERNERT, W. B., Aphis Immunity of Teosinte-Corn Hybrids, 390
- GIBBS, W. S., Cost of Living, G. Lusk, 18
- Glaciation, Pennsylvania, G. F. WRIGHT, 37
- GOODALE, H. D., Crossing-over in Sex-Chromosome, 213
- GOODSPEED, A. W., Amer. Philos. Soc., 219, 244
- GORDON, C. E., Obtaining Amoeba, 212
- GRANTHAM, A. E., Tilling of Wheat, 392
- GRAVATT, G. F., and P. SPAULDING, Inoculations on Ribes, 243; G. B. POSEY, and R. H. COLLEY, Uredinia on Ribes Stems, 314
- Gravitational Repulsion, F. E. NIPHER, 293
- GREENE, C. W., Federation of Amer. Societies for Exper. Biol., 452
- GUDGER, W. W., N. C. Acad. of Sci., 193
- Guinea-pig, "Heat Period" in, C. R. STOCKARD, and G. N. PARPANICOLAOU, 42
- GÜSSOW, H. T., Plant Diseases in Canada, 362
- Guthe, Karl Eugen and John Oren Reed, 207
- GUTHRIE, D. V., The Teaching of Optics, 434
- HAAS, A. R. C., Anesthesia and Respiration, 462
- HALL, I. C., and L. J. ELLEFSON, The Aerobic Cultures of Anaerobes, 570
- HAMMETT, F. S., Pre-medical Training in Chemistry, 504; and L. G. McNeile, Ingested Placenta and the Growth-promoting Properties of Human Milk, 345
- HARGITT, C. W., Family History Register, 113
- HARKINS, W. D., The Structure of Atoms and the Evolution of the Elements, 419, 443
- HARRIS, F. I. and H. S. HOYT, The Toxicity of Ultra-Violet Light, 318
- HARRIS, J. A., Physical Chemistry and Phytogeography, 25
- Harvard University, McKay Bequest, 559.
- HARVEY, E. N., Source of the Light in the Firefly, 241
- Health, of Munition Workers, 353; Researches, 512
- Healy, W., Mental Conflicts, R. S. WOODWORTH, 481
- HEDGCOCK, G. G., The Genus *Phoradendron*, W. Trelease, 516
- HEDRICK, E. R., The Significance of Mathematics, 395
- Hedrick, U. P., Peaches of New York, F. A. W., 439
- HENDERSON, L. J., Acidosis, 73
- Herb Growing in the British Empire, 114
- HILDEBRAND, S. F., U. S. Biol. Sta., 175
- HOLLAND, W. J., Laccépède or Lacépède, 484
- HOLMES, H. H., Rhythmic Banding, 442
- HOOKE, H. D., Jr., Law of the Minimum, 197
- Hookworm, Progress in combating, 533
- HOPKINS, C. G., A Simple Explanation, 362
- HORNADAY, W. T., Animal Collections from Australia, 133
- Hornet's Nest, Unique, H. A. ALLARD, 313
- Hospital, American, in London, 406; Memorial, Forbes Winslow, M. F. WINSLOW, 484
- Hospitals, Reconstruction, and Orthopedic Surgery, 305
- HOTCHKISS, W. O., Amer. Assoc. of State Geologists, 556
- HOUSE, H. D., Peek Testimonial Exhibit, 204
- HOWARD, L. O., Konchugaku Hanron Jokwan, T. Miyakem, 113; Amer. Assoc. for Adv. Sci., 560
- HOWE, J. L., Chemistry, A. Findlay, 364; Sulphuric Acid, G. Lunge, 438

- HOYT, H. S., and F. I. HARRIS, Origin of the Ultra-Violet Light, 318
- HRDLICKA, A., The Vanishing Indian, 266; Australian Aboriginal Crania, R. J. A. BERRY and A. W. D. ROBERTSON, 315
- Humidifiers, Radiator, E. P. LYON, 262
- HUMPHREYS, W. J., The Magnetic Field of an Atom, 273
- HUNGERFORD, C. W., Cereal Pathologists, 316
- Immunity, Aphis, of Teosinte-corn Hybrids, W. B. GERNERT, 390
- Indian, The Vanishing, A. HRDLICKA, 266
- Industrial Research in America, 163
- Inoculations on Ribes, P. SPAULDING and C. F. GRAVATT, 243
- Ions, Gaseous, and their Recombination, P. B. PERKINS, 589
- Iowa Acad. of Sci., J. H. LEES, 44
- Iron, Industry, 83; Ore and Pig Iron, 179
- Jackson, D. E., Pharmacology, D. I. MACHT, 388
- JEFFREY, E. C., Botany, C. S. GAGER, 617
- JONES, A. T., Euler's Dynamical Equations, 312
- Jones, E. Lester, Use of Mean Sea Level, W. BOWIE, 164
- JONES, L. W., Electromerism, 493
- JORDAN, D. S., The Colors of Letters, 311
- JOSEPHSON, A. G. S., Institute for the History of Science, 15
- K., A. E., Telephone Apparatus, G. D. SHEPARDSON, 462
- KARPINSKI, L. C., Recreations in Mathematics, H. E. LICKS, 215
- KEEN, W. W., A Predecessor of Priestley, 214
- Kelsey, C., The Physical Basis of Society, F. S. CHAPIN, 215
- Kentucky as an Oil State, J. H. GARDNER, 279
- KEYES, C., Bonneville Lake Beds, 139
- Keyser, C. J., The Human Worth of Rigorous Thinking, G. A. MILLER, 186
- Kikuchi, Baron Dairoku, 282
- KLOPSTEG, P. E., Force, 63
- KLOTZ, O., The New Moon, 290; Symbols, 360
- Knobel, E. B., Catalogue of Stars, B. BOSS, 365
- KOFOID, C. A., Algæ, G. S. WEST, 413
- KUNKEL, B. W., Benjamin Franklin, 437
- KUNZ, G. F., Sociedad Científica Antonio Alzate, 586
- Lacépède or Lacépède, W. J. HOLLAND, 484
- LAIRD, E. R., The Third Law of Motion, 341
- LANE, A. C., Economic Geology, H. RIES, 488
- Lane Medical Lectures, 333
- LANGFELD, H. S., Amer. Psychol. Assoc., 478
- Larvae, Starvation of, J. E. WODSEDALEK, 366
- LEES, J. H., Iowa Acad. of Sci., 44
- LEWIS, G. N., The Static Atom, 297
- LEWIS, J. V., The Phonograph, 587
- Licks, H. E., Mathematics, L. C. KARPINSKI, 215
- Liebig's Law of the Minimum, H. D. HOOKER, JR., 197
- Light, Ultra-Violet, F. I. HARRIS and H. S. HOYT, 318
- Lighting, Laboratory, W. M. ATWOOD, 641
- LILLIE, R. S., Chemistry, J. F. MCCLENDON, 565
- LIPMAN, C. B., The "Rawness" of Subsoils, 288
- Lizard, Horned, Urine of, A. O. WEESE, 517
- LOEB, J., The Chemical Basis of Regeneration and Geotropism, 115; of Axial Polarity in Regeneration, 547
- LOEB, L., Cancer, L. D. BULKLEY, 266
- Luminous and Non-luminous Insects, W. E. BURGE, 295
- Lunge, G., Sulphuric Acid, J. L. HOWE, 438
- LUSK, G., Books on Food, 18
- Lusk, G., Nutrition, L. B. MENDEL, 641
- LYON, E. P., Radiator Humidifiers, 262
- McAdie, A., Aerography, R. C. BROOKS, 264
- MCADIE, A., Aerography, 360
- McClendon, J. F., Chemistry, R. S. LILLIE, 565
- MACDOUGAL, D. T., and H. A. SPOEHR, Effects of Acids and Salts on "Bio-colloids," 269
- MACHT, D. I., Pharmacology, D. E. JACKSON, 388
- McM., J. P., Growth and Form, D. W. THOMPSON, 513
- MCNAIRN, W. H., The Story of Cosmological Theory, 599
- MCNEILE, L. G., and F. S. HAMMETT, Ingested Placenta, 345
- MACNIDE, W. DEB., Age and Acid Case Equilibrium, 643
- MacNutt, J. S., Milk Problem, L. F. RETTGER, 292
- MAGATH, T. B., Northern Lights, 290
- Magnetic Particle, A. H. COMPTON and O. ROGNLEY, 415
- Magnetism and Molecular Structure, A. P. WILLS, 349
- Malpighian Tubules, J. A. NELSON, 343
- Mannite in Silage, A. W. DOX and G. P. PLAISANCE, 192
- MANSON, MARSDEN, Antarctic Research, 639
- MASON, W. P., Chemistry, E. H. S. BAILEY, 540
- Massachusetts Inst. of Tech., Faculty Changes, 428
- MAST, S. O., Vitality of the Cysts of the Protozoan, 70
- Mathematical, Assoc. of Amer., W. D. CAIRNS, 207; Soc. Amer., F. N. COLE, 369, 518
- Mathematics, E. R. HEDRICK, 395
- MATHER, K. F., Canadian Stratigraphy and Paleontology, 66
- Matter, The Structure of, G. K. FALK and J. M. NELSON, 551
- MATTHEW, W. D., Man and the Anthropoid, 239
- MAXWELL, S. S., Nerve Holder, 517
- Mayo Foundation and the University of Minnesota, 284, 452
- MEAD, C. A., The Aurora Borealis, 367
- Mechanics, P. E. KLOPSTEG, 63; E. A. ECKHARDT, 340; E. R. LAIRD, 341
- Medals, John Scott Legacy and Edward Longstreth, 508
- Medical, Students and Conscription, 156, 232; Service for Army, 429; Officers, Rank and Authority, 485; Public Lectures, 632
- Medicine, The Graduate Degree in, L. B. WILSON, 127
- MEES, C. E. K., The Publication of Scientific Research, 237; The Production of Scientific Knowledge, 519
- MENDEL, L. B., Nutrition, G. Lusk, 641
- Meteor, A Texas, J. A. UDDEN, 616
- Meteorite, New, H. L. WARD, 262

- Meteorology and Aeronautical Engineering, 84;  
British Committee on, 55  
Metric Assoc., Amer., 612  
MEYER, A., Mental Adjustments, F. L. WELLS, 587  
MILLER, G. A., The Human Worth of Rigorous  
Thinking, C. J. KEYSER, 186  
MILLER, M. R., Filing Pamphlets, 263  
Mitchell, Maria, Memorial Fellowship, 405  
Mites attacking Crops, R. W. DOANE, 192  
Miyake, T., Konchugaku Hanron Hokwan, L. O.  
HOWARD, 113  
Mold Action and Soils, P. E. BROWN, 171  
MOOERS, C. A., Experiments with Phosphates, 210  
Moon, New, O. KLOTZ, 290  
MOORE, E. S., Oolitic and Pisolithic Barite, 342  
Moth, Clothes, R. C. BENEDICT, 464  
MUNCIE, J. G., Girdling of Bean Stems, 88  
Münsterberg, H., Letters, T. D. A. COCKERELL, 40  
MURPHY, R. C., Faunal Conditions in S. Ga., 112
- National, Research Council, 99; Financial Sup-  
port, 264, 335, 475; Service, Rewards for, X.,  
113; and Scientific Men, 233; Acad., Proceed-  
ings, E. B. WILSON, 141, 166, 567; Philadelphia  
Meeting, 492; Welfare and Organized Knowl-  
edge, P. G. NUTTING, 247  
Naturalists, Amer. Soc., B. M. DAVIS, 453  
NELSON, J. A., Malphigian Tubules of the Honey-  
bee Larva, 343; Orientation of objects in para-  
ffin, 387  
NELSON, J. M., and G. K. FALK, The Structure  
of Matter, 551  
Nerve Holder, S. S. MAXWELL, 517  
Newman, H. H., Biology of Twins, H. H. W., 486  
NIPHER, F. E., Gravitational Repulsion, 293  
Nitrates, Production by the Government, 256  
North Carolina Acad. of Sci., E. W. GUDGER, 193  
Northern Lights, T. B. MAGATH, 290  
NOYES, W. A., Chemical Laboratories and Na-  
tional Welfare, 1  
Noyes, Professor W. A. and the Amer. Chem. Soc.,  
582  
Nucleus, The Rôle of the in Oxidation, W. J. V.  
OSTERHOUT, 367  
NUTTING, P. G., Organized Knowledge and Na-  
tional Welfare, 247; Manufacture of Optical  
Glass, 538
- Occupational Census of the Army, 307  
Oil, under the Great Central Plains, 155; Field,  
Saratoga, Texas, E. S. MOORE, 342  
OLCOTT, W. T., Amer. Assoc. of Variable Star Ob-  
servers, 380  
Optical Glass, P. G. NUTTING, 538  
Optics, Teaching of, D. V. GUTHRIE, 434  
Ordnance Department of the Army, 258  
Orientation of Objects in Paraffin, J. A. NELSON,  
387  
Ornithologists, Deaths among, 450; Union, 559  
OSBORN, H. F., Algonkian Bacteria, 432  
Osborn, Henry Fairfield, Celebration, 477  
OSTERHOUT, W. J. V., The Nucleus and Oxi-  
dation, 367
- PALMER, A. DEF., Measurements, L. TUTTLE, 89  
PAPANICOLAOU, G. N., and C. R. STOCKARD, "Heat  
Period" in the Guinea-pig, 42
- PARSONS, C. L., Amer. Chem. Soc., 108; War  
Service for Chemists, 451  
Patent Reform, B. RUSSELL and J. JEWETT, 629  
Patents, Utilization for the Promotion of Re-  
search, T. B. ROBERTSON, 371  
Patterson, A. M., German-English Dictionary for  
Chemists, E. J. CRANE, 414  
Peck Testimonial Exhibit, H. D. HOUSE, 204  
PECKHAM, W. C., Erasmus Darwin and Benjamin  
Franklin, 459  
Pendulum, Foucault, W. C. BAKER, 489  
PERKINS, P. B., The Stansiphon, 216; Gaseous  
Ions, 589  
Petroleum, California, 231  
Pharmaceutical Experiment Station, 56  
Philosophical Soc., Amer., A. W. GOODSPEED, 219,  
244  
Phosphates, Field Experiments, C. A. MOOERS,  
210  
Physiological and Physical Laboratories, F. W.  
ELLIS, 416  
Physiologists and Biochemists, 307  
Physiology and the War, C. S. SHERRINGTON, 502  
Pig, Roast, H. P. ARMSBY, 160  
Placenta, Ingested, F. S. HAMMETT and L. G.  
MCNEILE, 345  
PLAISANCE, G. P., and A. W. DOX, Mannite in  
Silage Explosives, 192  
Plant, Diseases in Canada, H. T. GÜSSOW, 363  
Plants, Common Names, M. A. BIGELOW, 16; M.  
ARMSTRONG, 362; W. N. CLUTE, 483  
POGUE, J. E., Military Geology, 8  
POPENOE, P., Philippe de Vilmorin, 178  
POSEY, G. B., G. F. GRAVATT, and R. H. COLLEY,  
Uredinia on Ribes Stems, 314  
Potash Production, 282  
PRICE, W. A., Uffington Shales of W. Va., 540  
Priestley, Memorial, 154; A Predecessor of, W.  
W. KEEN, 214  
Psychological, Examination of Recruits, 308, 355;  
Assoc., Amer., H. S. LANGFELD, 478  
Psychology and National Service, R. M. YERKES,  
101  
Psychopathological Examination of Recruits, 156  
Puebla Ruin, in Colorado, J. W. FEWKES, 255
- Quotations, 17, 39, 65, 89, 163, 185, 264, 363, 411,  
460, 485, 512
- Radiation and Matter, W. DUANE, 347  
Rainfall, Extraordinary, D. H. CAMPBELL, 511  
Ramsay, Sir William, 30  
"Rawness" of Subsoils, C. B. LIPMAN, 288  
Read, M. L., Mothercraft Manual, G. LUSK, 19  
Recruits, Physiological Examination of, 308; The  
Physique of, 460  
Red Cross in France, 205, 381  
Reed, John Oren and Karl Eugen Guthe, 207  
Regeneration, and Geotropism, J. LOEB, 115; The  
Basis of Axial Polarity in, J. LOEB, 547  
Research Corporation, 131  
RETTGER, L. F., Milk Problem, J. S. MacNutt, 292  
REYNOLDS, E. S., Internal Telia of Rusts, 140;  
"Academic Freedom," 184  
Rhythmic Banding, H. H. HOLMES, 442  
RICHARDS, J. W., Pittsburgh Meeting of American  
Association, 638

- RIDDLE, O., Theory of Sex, 19  
RIDER, P. R., Frontal and Lateral Vision, 213  
Ries, H., Economic Geology, A. C. LANE, 488  
RIETZ, H. L., Observations, 588  
Robertson, A. W. D., and R. J. A. Berry, Australian Aboriginal Crania, A. HRDLICKA, 315  
ROBERTSON, T. B., Patents and the Promotion of Research, 371  
Robertson's, Professor, Gift to University of California, 352  
Rockefeller Institute, War Demonstration Hospital, 206  
ROGNLEY, A., and A. H. COMPTON, Ultimate Magnetic Particle, 415  
ROSENBERG, L., Colloid Chemistry of Fehling's Test, 617  
ROWNTREE, L. G., Meetings of Biological Societies, 583  
Royal Society Fellowships, 65  
RUSSELL, B., and H. J. JEWETT, Patent Reform, 629  
Russell, Dean H. L., The work of, 152  
Rusts, Internal Telia of, E. S. REYNOLDS, 140  
Salt-dome Oil and Gas Pools, E. W. SHAW, 553  
SARTON, G., An Institute for the History of Science and Civilization, 399  
SAYLES, R. W., American Geology, 162  
Science, Institute for the History of, A. G. S. JOSEPHSON, 15; G. SARTON, 399; and Industry, 89; Popular, R. S. BREED, 238; Enrollment in the High Schools, E. R. DOWNING, 351  
Scientific, Events, 10, 30, 54, 83, 106, 131, 155, 179, 205, 231, 256, 282, 305, 333, 352, 379, 404, 427, 451, 477, 506, 532, 557, 581, 610, 632; Notes and News, 13, 33, 56, 86, 109, 133, 158, 180, 208, 233, 259, 284, 308, 335, 356, 381, 407, 430, 454, 479, 509, 536, 561, 584, 612, 634; Books, 18, 40, 89, 113, 164, 186, 215, 240, 264, 292, 315, 342, 364, 388, 413, 438, 461, 486, 513, 540, 565, 587, 617, 641; Research, The Publication of, C. E. K. MEES, 237; Knowledge, The Production of, C. E. K. MEES, 519; British Committee on Research, 534; Studies, Conjoint Board of, 581  
SEEVER, F. J., Botrytis and Sclerotinia, 163  
Sex, Theory of, O. RIDDLE, 19; and Chromosome Differences in Sphaerocarpos, C. E. ALLEN, 466  
SHANTZ, H. L., Bot. Soc. of Wash., 72  
SHAW, E. W., Salt-dome Oil and Gas Pools, 553  
SHEPARDSON, G. D., Telephone Apparatus, A. E. K., 462  
SHERRINGTON, C. S., Physiology and the War, 502  
Sigma, Xi, The Future of, S. W. WILLISTON, 147  
SINNOT, E. W., "Age and Area" Hypothesis, 457  
Smelter Gases, R. W. DOANE, 295  
SMITH, H. I., Prehistoric Canadian Art and Commercial Design, 60  
Smithsonian, Botanical Expeditions, 31; Excavations in N. M., 532  
Social Sciences, C. A. ELLWOOD, 469  
Sociedad Cientifica Antonio Alzate, G. F. KUNZ, 586  
Societies and Academies, 72, 369, 518  
Soil Acidity and Drainage, S. D. CONNER, 346  
Soils, Chemical Transformation of, H. J. CONN, 252  
Soldiers, Wounded, The Care of, 448  
SPAULDING, P., and G. F. GRAVATT, Inoculations on Ribes with *Cromartium ribicola*, Fischer, 243  
Special Articles, 19, 70, 90, 115, 142, 167, 189, 216, 241, 269, 293, 318, 345, 367, 392, 415, 440, 462, 489, 517, 540, 568, 589, 618, 643  
Spitz, G. T., and F. Stern, Food for the Worker, G. LUSK, 18  
SPOEHR, H. A., and D. T. MACDOUGAL, The Effect of Acids and Salts on "Bio-colloids," 269  
Stansiphon, The, P. B. PERKINS, 218  
Star, Variable, Observers, W. T. OLCOTT, 380, 620  
States Relations Service and Agricultural Instruction, 232  
STEBBINS, J., Amer. Astron. Soc., 467  
Stern, F., and G. T. Spitz, Food for the Worker, G. LUSK, 18  
STEWART, J. Q., Atomic Weights and Atomic Numbers and Structure of Atomic Nuclei, 568  
STIEGLITZ, J., Chemistry in the U. S., 321  
STOCKARD, C. R., and G. N. PAPANICOLAOU, "Heat Period" in the Guinea-pig, 42  
STRONG, R. M., Wall Charts, 61; preparing Animal Material to be dissected, 564  
Surgeons, Museum of the Royal College of, 283  
Surgery, Oral and Plastic, 380  
SWANTON, J. R., Tsimshian Mythology, F. Boas, 514; A. MCADIE, 360  
Symbols, O. KLOTZ, 360  
Systematist, The Modern, L. H. BAILEY, 623  
Talking Machine and the Phonograph, J. V. LEWIS, 587  
TAUBENHAUS, J. J., Cotton Rust in Texas, 267  
Taubenhaus, J. J., The Sweet Pea, F. A. WOLF, 316  
TAYLOR, W. P., The Vertebrate Zoologist and National Efficiency, 123  
Technical, College Graduates in War Time, 17; Education, Effect of the War on, 334  
Thompson, D. W., Growth and Form, J. P. McM., 513  
Thyroid Removal, B. M. ALLEN, 216  
Tobacco, Bacterial Leaf Spot of, F. A. WOLF and A. C. FOSTER, 361  
Toronto, Univ. of, Connaught Laboratories, 452  
Trelease, W., The Genus *Phoradendron*, G. G. HEDGCOCK, 516  
Tuberculosis and the French Army, 10  
Tuberculous Soldiers, Farm Colonies for, 205  
Tuttle, L., Measurements, A. DEF. PALMER, 89  
UDDEN, J. A., A Texas Meteor, 616  
Uffington Shale, of W. Va., W. A. PRICE, 540  
U. S. Fisheries Biological Station at Woods Hole, 477  
University and Educational News, 15, 36, 60, 87, 111, 139, 160, 182, 210, 237, 287, 311, 339, 359, 385, 408, 456, 492, 510, 538, 585, 615, 638  
Uredinia of *Cromartium ribicola*, G. B. POSEY, G. F. GRAVATT, and R. H. COLLEY, 314  
VAIL, C. E., Climatic Pulsations, 90  
Vilmorin, Philippe de, P. POPENOE, 178  
Vision, Frontal and Lateral, P. R. RIDER, 213  
Vitality of Cysts of the Protozoan, S. O. MAST, 70  
W., F. A., Peaches of New York, U. P. Hedrick, 439  
W., H. H., Biology of Twins, H. H. NEWMAN, 486  
Wall Charts, R. M. STRONG, 61



- War, Service for Chemists, 32, 107; and Scientific Investigation, 39; Bread, 185; Service and the Medical School of the Univ. of Pa., 402
- WARD, H. L., A New Meteorite, 262
- Washington, Bot. Soc. of, H. L. SHANTZ, 72
- WATERMAN, W. G., Plant Ecology and Agriculture, 223
- WEBSTER, D. L., Equations as Statements, 187
- WEESE, A. O., Urine of the Horned Lizard, 517
- Weil, The Late Dr. Richard, 557
- Wells, F. L., Mental Adjustments, A. MEYER, 587
- West, G. S., Algæ, C. A. KOFOID, 413
- Wheat, Cropping, H. L. BOLLEY, 49; The Tillering of, A. E. GRANTHAM, 392
- WILLISTON, S. W., The Future of Sigma Xi, 147
- WILLS, A. P., Magnetism and Molecular Structure, 349
- WILSON, E. B., Proceedings of The Nat. Acad. of Sci., 141, 166, 567
- WILSON, L. B., Graduate Degree in Medicine, 127
- WINSLOW, M. F., Forbes Winslow Memorial Hospital, 484
- Wireless Time Service in the Philippines, 582
- WOODSEDALEK, J. E., Starvation of Larvæ, 366
- WOLF, F. A., The Sweet Pea, J. J. Taubenhaus, 316; and A. C. FOSTER, Bacterial Leaf Spot of Tobacco, 361
- Wood, Mechanical Properties of, 516
- WOODRUFF, L. L., Erasmus Darwin and Benjamin Franklin, 291
- WOODWARD, R. S., The Carnegie Institution and the Public, 573
- WOODWORTH, R. S., Mental Conflicts and Misconduct, W. HEALY, 481
- WRIGHT, G. F., Pennsylvania Glaciation, 37
- X., Rewards for National Service, 113
- YERKES, R. M., Psychology and National Service, 101
- Zoological Research, C. H. EIGENMANN, 302
- Zoologist, Vertebrate and National Efficiency, W. P. TAYLOR, 123